INTERNATIONAL LONG TERM CARE POLICY NETWORK

Measures adopted against COVID-19 in Long-Term Care services in Catalonia

Tivy Barón-Garcia, Jordi Amblàs-Novellas, Juan Carlos Contel Segura, Aina Plaza, Sebastià J Santaeugènia González, Teresa Arechavala, Emili Vela, Anna Vila Rull, Albert Espelt

Last updated 10th December 2020

Authors
Tivy Barón-Garcia (Grup de Recerca en Epidemiologia i Salut Pública (GRESP) UManresa, UVicc-UCC, Fundació Univesitària del Bages), Jordi Amblàs-Novellas (Grup de Recerca en Cronicitat de la Catalunya Central (C3RG) Universitat de Vic-UCC), Juan Carlos Contel Segura (Departament Salut, Generalitat de Catalunya), Aina Plaza (Departament de Treball, Afers Socials i Famílies, Generalitat de Catalunya), Sebastià J Santaeugènia González (Departament Salut, Generalitat de Catalunya), Teresa Arechavala (Grup de Recerca en Epidemiologia i Salut Pública (GRESP) UManresa, UVicc-UCC, Fundació Univesitària del Bages), Emili Vela (Àrea de sistemas d'informació. Servei Català de la Salut. Departament Salut, Generalitat de Catalunya), Anna Vila Rull (Departament de Treball, Afers Socials i Famílies, Generalitat de Catalunya), Albert Espelt (Grup de Recerca en Epidemiologia i Salut Pública (GRESP) UManresa, UVicc-UCC, Fundació Univesitària del Bages)

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Suggested citation
Barón-Garcia, T., Amblàs-Novellas, J., Contel Segura, JC., Plaza, A., Santaeugènia, SJ., Arechavala, T., Vela, E., Vila Rull, A., Espelt, A. Measures adopted against COVID-19 in Long-Term Care services in Catalonia. LTCcovid.org, International Long-Term Care Policy Network, CPEC-LSE, 10 December 2020.

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1. Key points

- In Catalonia, there were 235,856 confirmed cases of COVID-19 from 1st March 2020 to 25th October 2020. In the first wave, COVID-19 cases were underestimated due to the lack of diagnostic tests.
- In Catalonia, the areas with the highest incidence were the Northern Metropolitan Area, Barcelona, and the Southern Metropolitan Area. COVID-19 mainly affected the age groups between 40 and 49 years. The highest mortality occurred at the end of March 2020, with more than 400 deaths daily.
- Between 1st March 2020 and 25th October 2020, 20,486 people who use long-term care became infected with COVID-19. 6,698 of them died.
- To deal with the current epidemiological situation in long-term care system, both Departments of Health, and of Labour, Social Affairs and Families of the Generalitat de Catalunya developed new Contingency Plans for users and staff of the long-term care system. Several measures were proposed:
    - Redistribution of services and staff.
    - Involvement of Primary Care professionals working together with professionals from the Department of Health and the Department of Labour, Social Affairs and Families.
    - Coordination between Intermediate care system and Social Services system.
    - Enabling alternative spaces to relocate people with COVID-19 infections.
    - Restriction of relatives' visits at nursing homes.
    - Classification of nursing homes according to their isolation capacity. Classification of nursing homes according to whether there were active cases of COVID-19 or not.
    - Electronic and digital resources were also incorporated in long-term care systems' centres.

2. Introduction

Catalonia is an autonomous community in the North-East of Spain. It has a population of 7.7 million people, of which 5.7 million live in the urban region of Barcelona[1].

Spain has a large share of older people with multiple diseases, chronic conditions and complex care needs (Amblàs-Novellas et al., 2020; Garcia-Codina et al., 2019). In recent years, the Catalan population has also become increasingly older. Currently, Catalonia has one the highest life expectancies in the world and there has been a large increase in the numbers of people living with chronic conditions and needing support with activities of daily living (Sánchez et al., 2017).

[1] http://www.idescat.cat/pub/?id=aec&n=245&lang=es=Confirmar

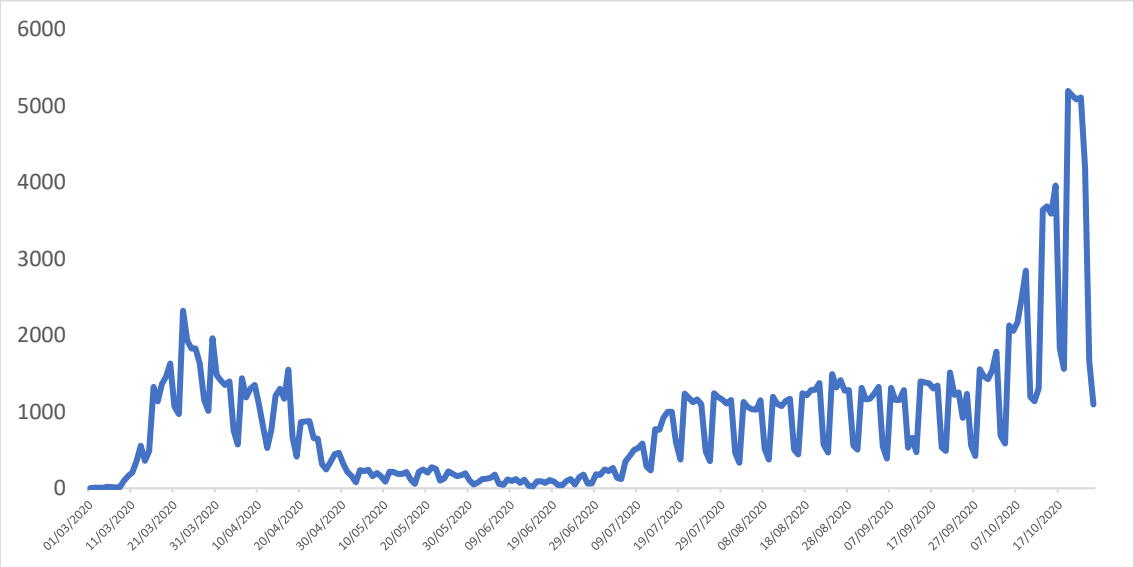
This demographic and epidemiological situation means that it is extremely important to ensure the proper development of an integrated Social and Health care system to deliver care, treatment and support that enables people to live as independently as possible while compensating for losses in capacity and functional ability. (Servei Català de la Salut, 2019). Long-term care services in Catalonia are provided by both Health and Social Care services. On the one hand, there is an Intermediate Care system which has specialized home health care services. On the other hand, there are Social Care services which gives care and support in activities of daily life to their users (Servei Català de la Salut, 2019).

This document aims to describe measures adopted against COVID-19, specially focusing on infection control in the Long-Term Care system in Catalonia. This paper aims to contribute to the international sharing of experiences and lesson-learning. In the future, governance and policy measures will also be analyzed, to contribute to the evaluation of the pandemic response.

3. Extent of COVID-19 infections in the population and deaths

Spain has been one of the countries with the highest impact of COVID-19 in Europe, particularly in big cities such as Madrid or Barcelona. Between the 1st March to 25th October 2020, there have been 235,856 confirmed cases of coronavirus in Catalonia and 13,856 people have died with coronavirus, most of them over the age of 70. As we can see in figure 1, March and April 2020 were the months of highest incidence during the first wave. In September and October, the incidence of cases increased again, constituting the beginning of the second wave. It is important to note that, during the first wave, the case numbers are known to be an underestimate as at that time diagnostic tests were only performed on people who had worse symptoms and were often hospitalized. Therefore, asymptomatic, and mild or moderate cases were uncounted in the first wave. In the second one they more likely to be counted due to increased testing capacity.

Figure 1. Number of reported cases of COVID-19 in Catalan population from 1st March 2020 to 25th October 2020.



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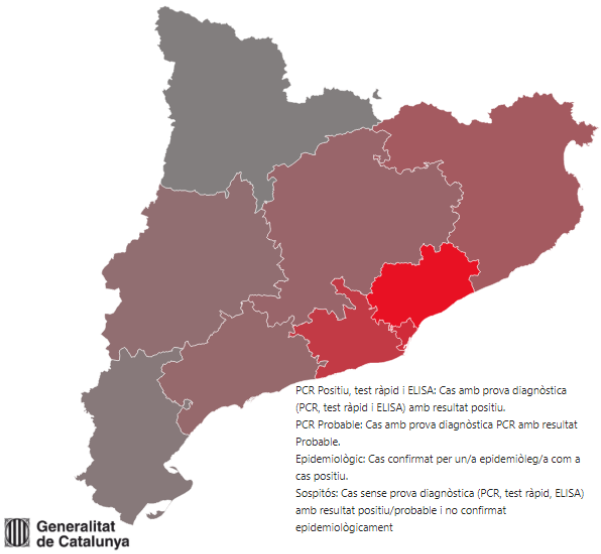
On the map we can see the incidence of COVID-19 infections in different Catalan Health regions until the 25th October 2020. Àrea Metropolitana Nord is the area where there has been the hightest incidence in Catalonia, followed by Barcelona, and the Àrea Metropolitana Sud. Alt Pirineu and Terres de l'Ebre have been the areas with the lowest incidence of COVID-19 cases.

Figure 2. Reported COVID-19 cases according to Health regions in Catalonia until 25th October 2020.



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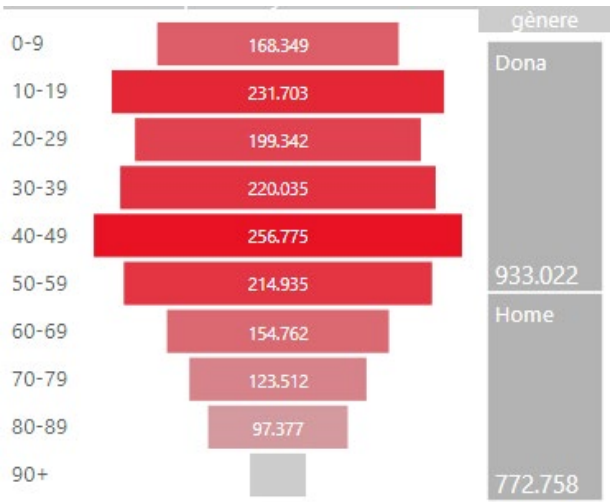
The largest number of cases have been among people aged 40-49 and 10-19, followed by those aged 30-39 and 50-59.

Figure 3. Reported COVID-19 cases by age group in Catalonia from 1rst March 2020 to 25th October 2020.



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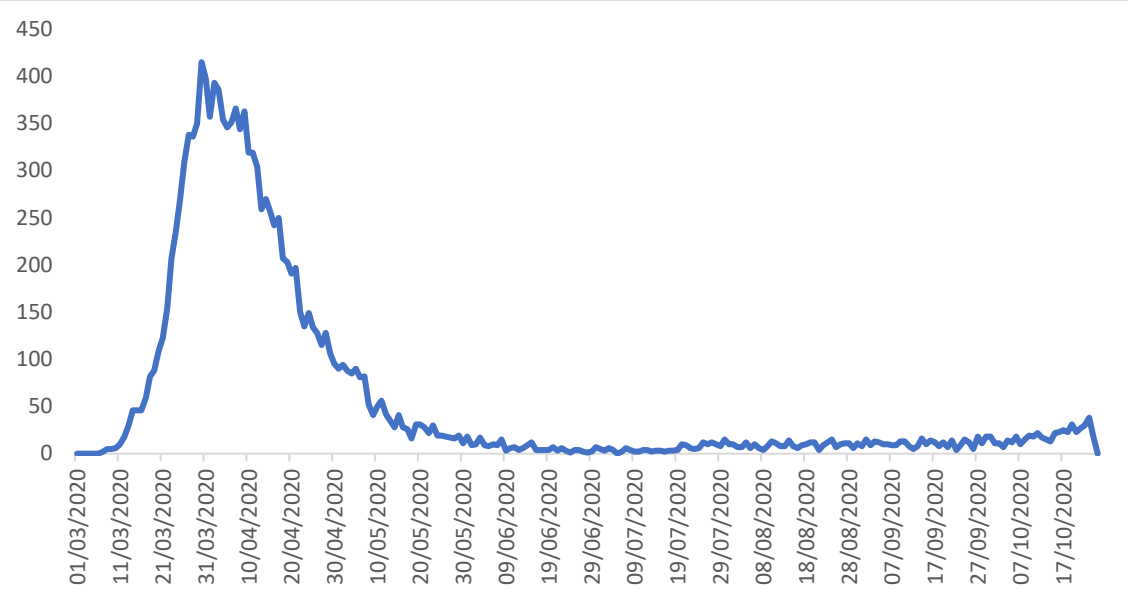
In the first wave, the months with the highest numbers of daily deaths were March and April 2020. By the end of March, more than 400 deaths were reported daily. In October, in the second wave, we can see a slight increase in daily deaths, but they do not exceed 100 deaths per day.

Figure 4. Deaths by coronavirus in Catalan population from 1st March 2020 to 25th October 2020.



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The health regions with the highest number of COVID-19 deaths (until the 25th October) have been Barcelona, Àrea Metropolitana Nord, Àrea Metropolitana Sud and Catalunya Central. If we analyse it in terms of deaths per 10,000 inhabitants, the most affected counties have been: Barcelonès, Anoia, Bages, Moianès, Berguedà, Osona and Priorat. The least affected has been Pallars Sobirà. COVID-19 deaths have been different by age and sex. In absolute numbers, more deaths are observed among men before the age of 75 and among women after the age of 75.

Figure 5. Deaths by COVID-19 according to Health regions in Catalonia from 1st March to 25th October 2020.

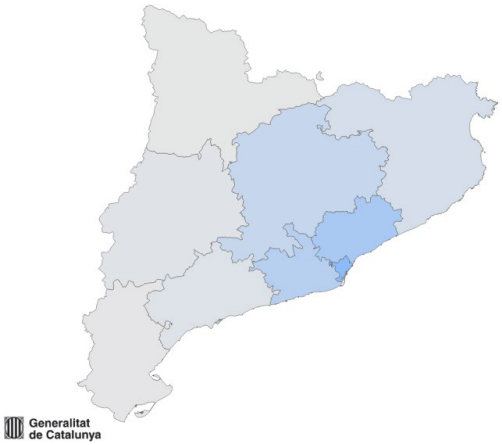

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Figure 6. Death rate by COVID-19 by county per 10,000 inhabitants in Catalonia from 1st March to 25th October 2020.

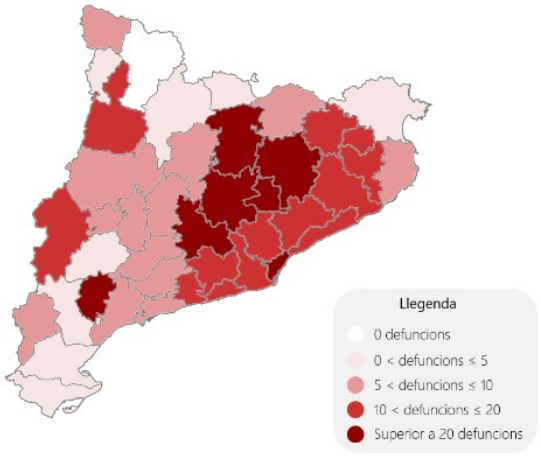

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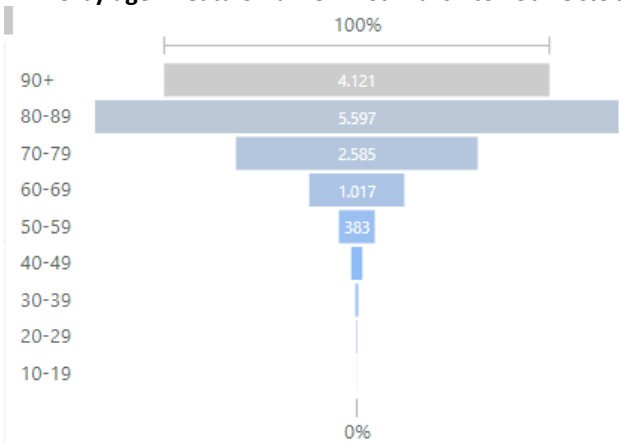
Figure 7. Deaths by COVID-19 by age in Catalonia from 1st March to 25th October 2020.



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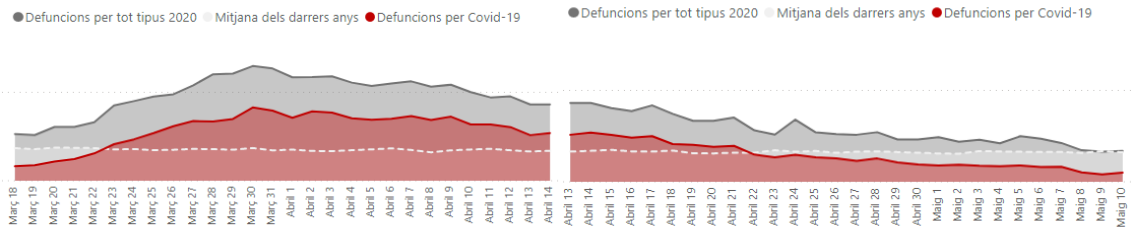
If we compare the total number of deaths during the first wave by COVID-19 with the average number of deaths at the same time in the year of previous years we can see that during March and April 2020 there was a significant excess of mortality (11,620 more deaths from the deaths average of previous years in the same period). Catalonia is the fifth area in Spain with the highest mortality rate (Muñoz et al., 2020).

Figure 8. Excess deaths in Catalonia, between March-May 2025



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4. Population level measures to contain spread of COVID-19

The Spanish government declared the State of Alarm in Spain on 14th March 2020 and ordered home confinement. The State of Alarm gave power to the central government and did not allow different autonomies to act independently. That is the reason why Catalonia could not decide its own measures during the first wave of coronavirus. During the confinement it was forbidden to leave the home, except in situations where some essential activity had to be carried out, such as purchase of food, pharmaceuticals and basic necessities, attendance at health centres, and attending to dependent or vulnerable people. People were forced to work from home except in case of essential services such as hospitals, supermarkets, or gas stations, when people needed a work certificate. Shops, schools, colleges, and universities were closed, and all non-essential activities were suspended. Surgical masks, maintaining social distance and using hydroalcoholic gel for hands was imperative for everyone in the street or in public establishments. Failure to comply with measures proposed by the government could lead to penalties from 600 to 30,000 euros.

The measures were “de-escalated” from May 2020. It was a process that consisted of 4 phases of 15 days each to gradually leave the confinement. In each phase different activities could be done by the population. According to some markers such as the virus transmission situation or the health capacity of each territory, the phases were applied at different times in the different autonomous communities. Catalonia was one of the last to enter these phases. The State of Alarm ended on 21st June 2020. The 4 phases in de-escalation from May to June 2020 consisted of:

- **Phase 0:** Children and older people were allowed to walk outside at specific times of the day, recommendation to work from home when possible, opening of the retail trade without prior appointment, permission of meetings of a maximum of 10 people, permission to buy food to take away, limitation of the public services to 30%, opening of schools for administrative work, opening of research centres.

- **Phase I:** Up to 10 people could walk together, permission to practice non-professional sports activities in specific periods of time, maximum of 15 people meetings, permission to move around the province, opening restaurants' terraces with a limitation of 50% of capacity and maximum 10 people per table, opening of hotels excluding common areas.

- **Phase II:** Up to 15 people could walk together, permission to practice non-professional sports activities in specific periods of time, mobility around the province, promotion of working from home, opening of shopping centres with limited capacity at 40%, opening restaurants with a capacity of 30%, restart of classes in schools and colleges, opening of cinemas and theatres with 33% of their capacity, opening of hotels 'common areas limited to 33% of their capacity.

- **Phase III:** Social contact allowed for non-vulnerable people, meetings maximum of 50 people, shopping centres at 50% of capacity, cinemas, and theatres at 50% of their capacity, hotels' common areas limited to 50% of their capacity.

At the end of June 2020, when the State of Alarm finished, the central government gave decision-making power to the different autonomies. The Catalan government took different measures to contain the spread of COVID-19. In this period called "New Normality" epidemiological surveillance and the protection of citizens was maintained. Some rules were implemented: abolition of mobility restrictions, meetings and social activities allowed without exceeding the capacity permitted, permission of sport practice and opening of playgrounds, social distance between people of a meter and a half, obligation of wearing a face mask in the street and public establishments and demand of frequent hand hygiene.

In July 2020, to increase the protection of the most vulnerable people, people who had more risk of dying or being hospitalized by COVID-19 were identified. For that reason, the entire population was stratified according to their probability of being hospitalized by COVID-19, the probability of needing an ICU (intensive care unit) due to the COVID-19, and the probability of dying from COVID-19. From the crossing of these three probabilities, 4 mutually exclusive risk groups were obtained: very high risk (8% people), high risk (16%), moderate risk (23%) and low risk (53% people).

In October 2020, the Spanish government proclaimed a new State of Alarm in Spain. However, it empowered different autonomies to decide on the relevant measures. On 25th October 2020, the Catalan government authorized a new package of restrictive measures due to the increase of COVID-19 reported cases. These measures consisted of restricting night mobility between 10 pm and 6 am, limiting social meetings to 10 people maximum, keeping social distance between people and using facemasks and hydroalcoholic gel for hands. There was also local confinement during the weekends (people were not allowed to travel to other areas).

5. Impact of the COVID-19 pandemic on people who use and provide Long-Term Care

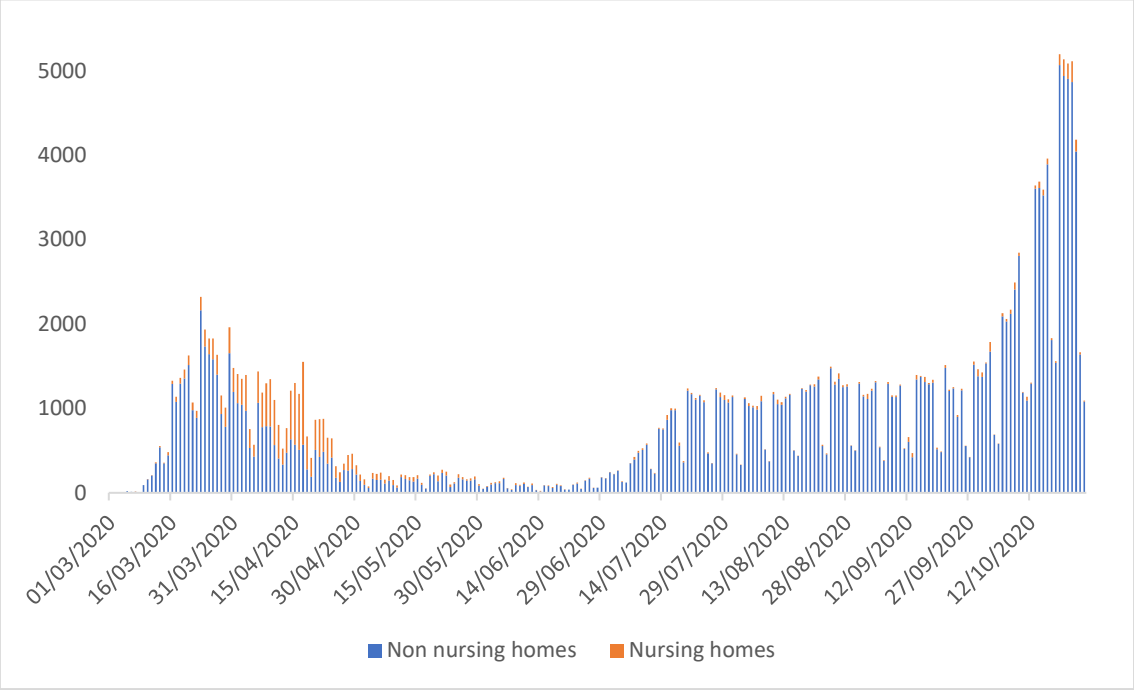
5.1. Rates of infection and mortality among people who use LTC and staff

At the end of December 2019 there were 39,972 people with recognized functional dependency who received home care services, about 20,000 in day centers and 74,341 people in nursing homes. 84% of them were older people. Between 1st March 2020 and 25th October 2020, 20,486 of these people had been infected with COVID-19, of whom 6,698 (32,7%) died. 0.4% died at home, 62.6% died in nursing homes, and 11% in a hospital or health centre.

As we see in the graphs below, the incidence rate of COVID-19 was highest from mid-March 2020 to late April 2020. Deaths were mostly concentrated from mid-March 2020 until mid-May 2020. At the start of the first wave there was not enough personal protective equipment (PPE) for all the people.

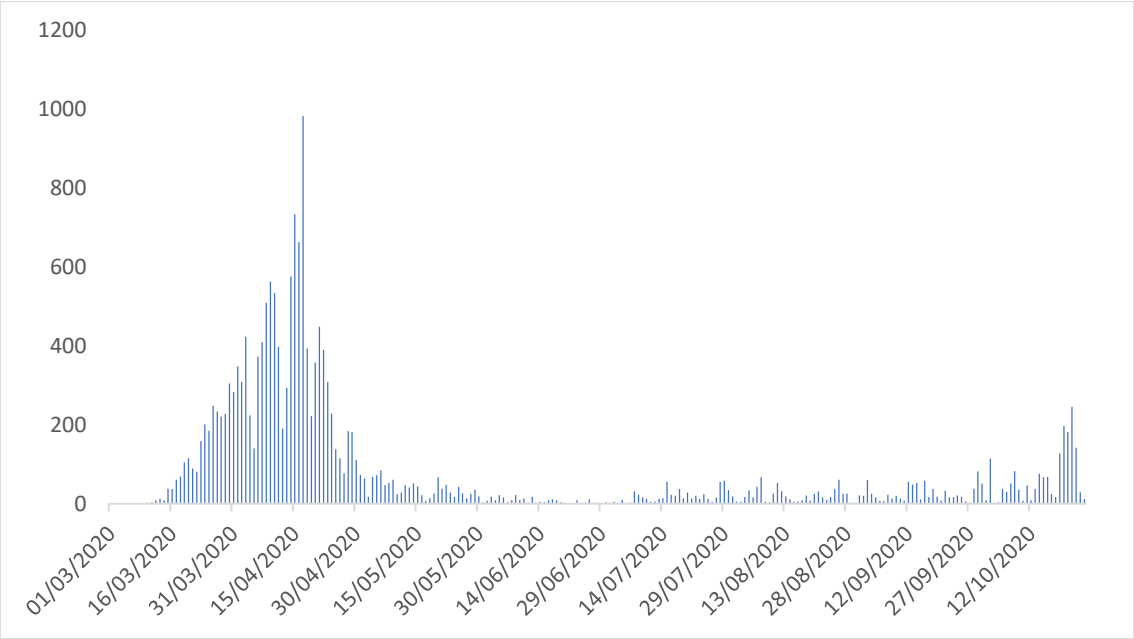
Between March and August 2020 there was an excess of mortality in dependent people, compared to the expected mortality which was calculated with the average number of dependent people who died in 2017 (Instituto de Mayores y Servicios Sociales, 2020).

Figure 9. Reported cases of COVID-19 in Catalonia from 1st March 2020 to 25th October 2020.



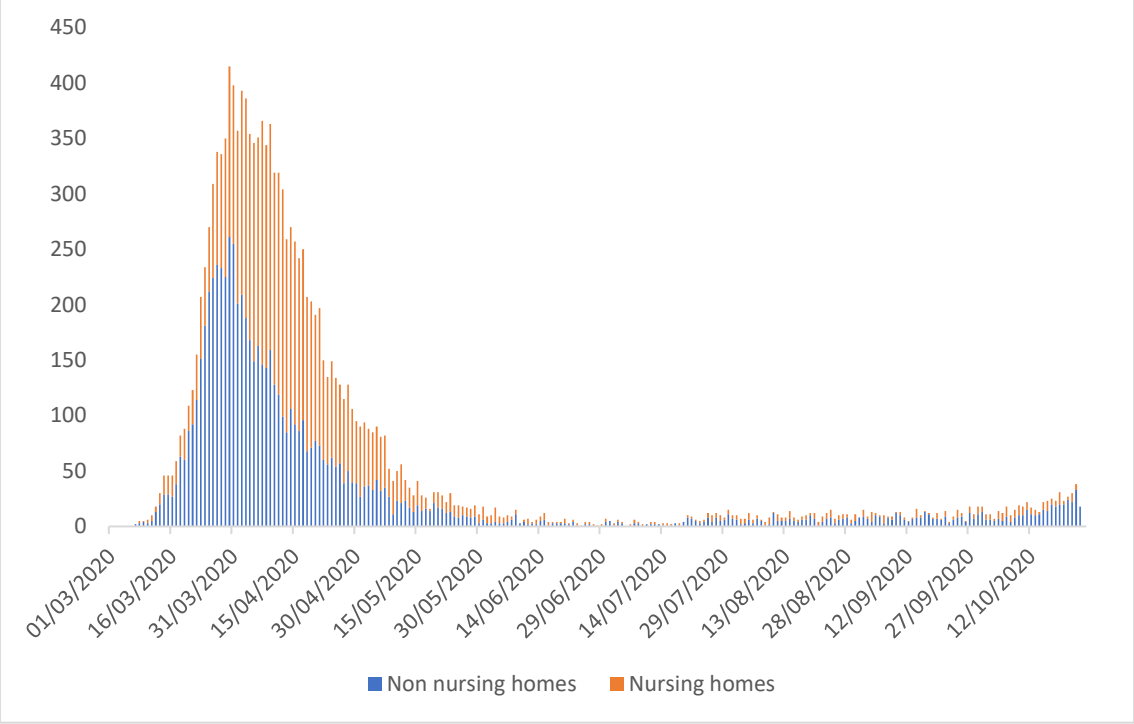
Source: ***https://dadescovid.cat/?drop_es_residencia=2***

Figure 10. Reported cases of COVID-19 in nursing homes of Catalonia from 1st March 2020 to 25th October 2020.



Source: ***https://dadescovid.cat/?drop_es_residencia=2***

Figure 11. Reported deaths by COVID-19 in Catalonia from 1st March 2020 to 25th October 2020.



Source: ***https://dadescovid.cat/?drop_es_residencia=2***

During the first wave, not all positive cases of COVID-19 among long-term care staff could be recorded due to the lack of diagnostic tests. However, it is known that 2,961 professionals were diagnosed as positive in COVID-19, and 1,180 considered to be probable cases. 5 professionals died from COVID-19 infection.

During the second wave, a census of professionals involved in the management of COVID-19 in long-term care services was considered.

6. Brief background to the long-term care system

Long-term care system as a concept that encompasses all the actions carried out within this area does not exist in Catalonia. In Catalonia long-term care services are provided by both Health and Social Care services. On the one hand, there is the Intermediate Care system which has specialized Home health care services and depends on the Department of Health of the Generalitat de Catalunya. On the other hand, there are Social Care services which provide care and support in activities of daily living and depends on the Department of Labour, Social Affairs and Families of the Generalitat de Catalunya (Servei Català de la Salut, 2019). At some points they are interrelated. The intermediate care system consists of health services where most specialized geriatric health care is concentrated. The Social care services system is mostly mainly based on nursing homes which give support to older people, people with disabilities and people with mental health problems. In nursing homes there are always health professionals (doctors, nurses, physiotherapists ...).

In addition, in Catalonia there is a Home care system, which falls under both the Intermediate care system and Social care services system. Home health care refers to the part of Home care that depends on the Department of Health, and Home care or Home help refers to the part of Home care that depends on the Department of Labour, Affairs and Families. Health and Social care professionals often work together.

6.1. Intermediate care system

Intermediate care facilities are healthcare spaces equipped with the structure and staff needed for patients with health and social care needs. Intermediate care facilities include care for sick people, usually chronically ill, and people with disabilities who, due to their special characteristics, can benefit from the simultaneous action of health and social services to enhance their autonomy, alleviate their limitations or suffering and facilitate their social reintegration.

In intermediate care facilities there are (Servei Català de la Salut, 2019):

a) Hospitalization centers: long-stay units, convalescence units, palliative care units and subacute care units.

b) Centres without internment: day hospitals and assessment and support teams.

6.2. Social care system

All the people who have obtained official recognition of functional dependency in one of the degrees established by the Spanish Dependency System can be given support by Social care Services. The Department of Labour, Social Affairs and Families decides which Social care services are assigned in each case, according to personal situation, family environment and availability of services. These services include:

a) Home help

b) Services for prevention and assessment of dependency situations

c) Day centres and nursing homes

d) Services for the promotion of personal autonomy

e) Specialized services for people with disability

6.3. Services for people with functional dpendency

On 31st December 2019, there were 39,972 people receiving Home care services in Catalonia. In 2018 there were 19,336 places in day centres for older people (Departament de Salut, 2020d).

In 2020 there are 71,341 places in nursing homes in Catalonia. 84% of them are for older people. Nursing home places for older people (59,935) are distributed as follows:

- Alt Pirineu i Aran: 768
- Barcelona Ciutat: 14,317
- Camps de Tarragona: 4,106
- Catalunya Central: 5,232
- Girona: 6,969
- Lleida: 3,995
- Metropolitana Nord: 13,419
- Metropolitana Sud: 9,545
- Terres de l'Ebre: 1,584

7. Long-term care policy and practice measures to mitigate the impacts of COVID-19 in Catalonia

In order to respond to mitigate the impact of COVID-19 on people who use care services, the Department of Health and the Department of Labour Social Affairs and Families of Generalitat de Catalunya have applied measures that have constituted an organizational and professional challenge.

7.1. Whole sector measures

7.1.1. Social services system measures

From the beginning of the pandemic, the Department of Labour, Social Affairs and Families gave priority to social emergencies, home care services, dining services, and care for children and young people at risk. Priority was also given to screening new users to assess urgency and postponing non-urgent care, identifying the already scheduled care for groups vulnerable to COVID-19 and rescheduling them and identifying who had less attention. The Department encouraged telephone and remote working whenever possible and ensured face-to-face attendance in urgent cases.

As organizational measures of the Catalan Social Services System, in each basic health area (ABS), there had to be at least one Social services team for social emergency care for every 20,000 inhabitants. There was a redistribution of services and staff in the different centres and services, public and private, of the Catalan Social Services System. Professionals were incorporated by order into the public and private centres of the Catalan Social Services System, prioritizing the Order TSF / 216/2019, which regulates the professional qualification of auxiliary staff. For an urgency reason, if there were no staff with any of the qualifications required, these functions could be carried out by people who, without having a qualification, had had experience professional care experience (Direcció General de l'Autonomia Personal i la Discapacitat del Departament de Treball, Afers Socials i Famílies, 2020e, 2020f; *RESOLUCIÓ TSF/778/2020, de 25 de març, per la qual es concreten les mesures excepcionals organitzatives i de recursos humans en l'àmbit dels serveis socials del Sistema Català de Serveis Socials a causa de la crisi sanitària provocada per la COVID-19.*, s. f.).

7.1.2. Coordination between the Social services system and Intermediate care facilities

During the first wave, there was a high participation of Primary Health Care (PHC) staff in Intermediate care centres and Social services centres. There were rapid transfers between nursing homes and Intermediate care services when needed, especially in subacute units or palliative care units.

In addition, during the worst period of the first wave, alternative spaces were enabled to relocate people, such as hotels adapted for people without disabilities.

7.2. Care homes (including intermediate care facilities, home health care, home help, nursing homes, day centres)

7.2.1. Intermediate care facilities

March 2020

A classification of 3 categories in Intermediate Care facilities was introduced:

1) Intermediate Care centres behaving as subacute and post acute facilities with high capacity to manage COVID-19 patients in difficult conditions (type 1).

2) Intermediate care facilities type 2 as a supplementary network to relieve some overburdened centres of type 1.

3) A third category of Intermediate care centres giving support for non-COVID-19 patients or earlier COVID-19 recovered patients who could not have been discharged to home directly.

During the worst period of the first wave, the Department of Health of the Generalitat de Catalunya adopted measures for the Intermediate care system to ensure a high-quality care and to guarantee prevention and protection from the infection for both users and staff.

In the Intermediate care facilities, there were minimum requirements: availability of single or double rooms to isolate COVID-19 cases, availability of oxygen intake, availability to isolate an area of the centre, availability of health staff, communication with Public Health, knowledge of users and professionals regarding to the measures of hygiene and organization.

In possible, probable, or positive cases of COVID19, people should be isolated in the single or double room or in a place where the safety distance of 2 meters with other people was guaranteed. The room had to have ventilation, communication system and the material needed for hygiene. Sick people could not receive visits and had to follow the rules of hygiene and respiratory hygiene: use a mask, wash hands frequently... The duration of isolation, in mild cases without hospitalization, was 14 days from the onset of symptoms. After 7 days of the onset of symptoms, if there was clinical improvement and the diagnostic test was negative, staff had to return to the care activity, avoiding contact with immunocompromised people. If the result of the diagnostic test was positive, the isolation had to last 14 days.

Staff from the intermediate care centres had to keep the safety distance between people, use surgical masks and use gloves. Strict hand hygiene should be maintained before and after customer service. Visits were limited to one family member per patient and visitors had to wear a surgical mask and follow the recommendations for hand hygiene.

Intermediate care centres monitored cases and established a support network for the admission of patients from nursing homes in the territory (Servei Català de la Salut, 2020b).

May 2020

In mid-May 2020, visits had to be arranged by prior appointment, they were done in the considered clean areas and only if the clinical situation of the patients permitted it. It was recommended to have a reception room with differentiated entrances for patients and visitors, and there had to be the resources needed to keep a safe distance and carry out the use of a mask and hand hygiene. Apart from face-to-face visits, the possibility of using telephones and videoconferencing had to be guaranteed (Departament de Salut, 2020b).

7.2.2. Social care service System

7.2.2.1. Nursing homes

March 2020

In March 2020, visiting was restricted as much as possible and the entry was only allowed in urgent cases. New admissions were temporarily suspended to provide additional space for isolation.

The use of common areas was restricted as much as possible, professional equipment was distributed by plants and group outings were suspended. Infection prevention and control, hygiene measures as keeping the safety distance and washing hands were strengthened and the monitoring of these measures was introduced. Residents with respiratory symptoms had to restrict their mobility in a well-ventilated room. Professionals had to use personal protective equipment (PPE) and perform hygiene measures (Direcció General de l'Autonomia Personal i la Discapacitat del Departament de Treball, Afers Socials i Famílies, 2020c).

April 2020

In early April 2020, the Department of Health established care intervention measures based on the stratification of three types of nursing homes:

- Type A Centres: nursing homes with healthcare and social care staff and with the ability to provide an isolation zone with the minimum requirements for people with positive COVID-19 or suggestive symptoms.

- Type B Centres: nursing homes with healthcare and social care staff and with difficulties in procuring an isolation zone with the minimum requirements for people with positive COVID-19 or suggestive symptoms.

- Type C Centres: nursing homes without healthcare professionals and which could not meet the minimum requirements to provide an isolation zone.

The care home residents were classified into five categories, based on level of severity. The 1rst Grade was people whose symptoms were minimal and did not affect to the perform of daily living activities, and the 5th Grade was people whose symptoms caused an impossibility to carry out their daily living activities. Once the classification was done, people were identified according to:

- People type α (alpha): people completely autonomous for the basic activities of daily living (ABVD), or those who need some kind of non-professional support. Grade I II of disability.

- People type β (beta): people who need total or partial support, which would be the case of people needing full support with activities of daily and or with advanced dementia. Grades III, IV, V of disability.

Possible, probable, or confirmed cases of COVID-19 could be treated in nursing homes when patients had mild symptoms. People with more severe symptoms were referred to acute hospitals and Intermediate care centres.

Regarding to general prevention and control measures in nursing homes, it was mandatory for professionals to wear exclusive clothing and shoes for work, to keep a safe distance between people, to perform hand hygiene and to use of a surgical mask, gloves, and personal protective equipment. In addition, the use of FFP2 mask was recommended. The centre had to have the resources and materials for hygiene and maintain strict hygiene of all the materials and areas. In addition, the centres had to provide training in COVID-19 prevention measures to their staff and had to meet certain minimum requirements: availability of single rooms with good ventilation, coordination between management team and availability of professionals and necessary resources. In case of isolation from a possible, probable, or positive case, the resident had to remain in the individual room with ventilation and an intercommunication service. Family members had to be informed if a resident was a probable, possible, or confirmed case of COVID-19 (Departament de Salut, 2020d; Servei Català de la Salut, 2020a, 2020b).

May 2020

In May 2020, nursing homes were divided in 3 different areas (green, yellow and red), where people were located according to COVID-19 risk. Green areas were “clean” COVID-19 areas, in yellow areas there was risk of infection, and in red areas there were COVID-19 isolated patients. In nursing homes, PCR tests were used to detect new COVID-19 cases, and, for each area, specific protection measures were used.

A de-escalation plan was also drawn up in nursing homes to preserve the safety of residents, their relatives, and the professionals. The different phases for nursing homes required:

- Phase 0: No new admissions were allowed. Only visits from relatives in a situation of end of life. Permission to walk through the clean areas inside the nursing homes.

- Phase I: Acceptance of new residents from home, Intermediate care centres or acute hospitals if nursing homes had no positive COVID-19 cases.

- Phase II: Possibility of admission to nursing homes with a low incidence of cases, with low risk of infection and if they were correctly sectored. Common areas could be shared in green zones and the entry of external professionals was allowed.

In case of admission to a nursing home, the person had to have a negative PCR test performed in the previous 24-48 hours (Departament de Salut, 2020f).

Regarding the visits of relatives, the recommendations in May 2020 were, according to the de-escalation plan:

- Phase 0: prioritization of follow-up visits and end-of-life support.

- Phase I: add the prioritization of visits for residents in a situation of decompensation.

- Phase II: Generalization of visits to all types of residents.

- Phase III: Visits by relatives (up to 3 people) in areas outside the nursing home.

At the end of the State of Alarm, all residents could be visited if they were not infected by COVID-19. Visits had to be authorized by the centres and the visiting areas had to have all the resources and materials to keep the distance between people and to maintain proper hygiene. Visitors were required to wear a surgical mask and make use of the hand hydroalcoholic gel (Departament de Salut, 2020b).

August 2020

A Contingency Plan for nursing homes was developed for the Autumn of 2020 (Departament de Salut, 2020e). Measures included

- Prevention of the onset and spread of infection: The most effective tool to prevent infection among residents and professionals was the proper use of personal protective equipment. Each nursing home had to establish its own plan for the supply and storage of personal protective equipment for its workers. A hygiene manager and a supervisor of the rules were needed.

- Regarding the sectorization of centres, it continued the recommendation of the delimitation of 3 areas in nursing homes: green, yellow, and red zone.

- Ensuring the training of professionals and residents in Infection Prevention and Control.

- Early detection of infection and Public Health intervention from the Catalan Public Health Agency (ASPCAT) and the Barcelona Public Health Agency (ASPB).

- Territorial health care: structural reinforcement of primary and community health care (163 medical professionals needed in nursing homes throughout Catalonia and 270 nursing professionals).

- Social care, management, and reinforcement of nursing homes: provision to deal with possible outbreaks, planning to provide support spaces for the relocation of residents who needed it, maintaining permission to return to the family environment if the resident requested it temporarily and voluntarily, new security, protection, and organizational measures, strengthening of the figure of the hygienic-sanitary manager, and training plan for newcomers to nursing homes.

- Information systems: incorporation of the electronic Primary Health Care app (ECAP), COVID-19 impact monitoring system in nursing homes, sentinel nursing homes network to identify incidents in nursing homes at an early stage.

October 2020

As a result of the increase in the incidence of COVID-19 cases in October 2020, additional measures were established by the Generalitat de Catalunya. Screening for nursing home professionals was strengthened, prioritizing the most impacted nursing homes. Prevention and protection measures were intensified, an updated list was provided with the essential items required, continuation of the sectorisation and training of staff.

In terms of strengthening residents' relationships with their relatives, clean nursing homes were required to facilitate a minimum of one weekly visit. Red nursing homes had to provide telematic tools for residents' communication with their families (Departament de Salut, 2020a).

7.2.2.2. Home care

March 2020

During the first wave of the pandemic, priority was given to home care services for people in a situation of dependency who lived alone and had insufficient family support, and people in a vulnerable situation. In some cases, telematic support was also given. Priority was given to cover the basic activities of daily living.

Home care had to adapt to each specific situation and cold vary in intensity, ranging from a simple home visit to check if needs were well met by family caregivers, to the

increase in the provision of support for essential daily activities, or increasing intensity of support.

Home care professionals could not provide the service if they had respiratory symptoms, flu, or fever, or if they had been in risk areas for the last 14 days. Professionals had to perform hand hygiene and use the usual self-protection measures, same as the family members and cohabitants in home.

People who were receiving care had to stay in a single-use room with ventilation, with a bathroom for exclusive use, with communication device and with the resources needed to ensure hygiene (Direcció General de l'Autonomia Personal i la Discapacitat del Departament de Treball, Afers Socials i Famílies, 2020g, 2020d).

7.2.2.3. Day centres

March 2020

On 12th March 2020, the General Directorate of Personal Autonomy and Disability of the Department of Labour, Social Affairs and Families recommended some measures in day centres: restriction of access to users and professionals; users could not go to day centre if they had respiratory symptoms, flu or fever, or had been in risk areas for the last 14 days; suspension of group activities; a single-entry access was enabled to control entrances and exits; and suspension of new admissions.

Regarding to personal hygiene, it was recommended to perform frequent hand hygiene (washing with soap and water), to avoid close contact with people who showed signs of a respiratory infection, to keep the safety distance and to avoid shaking hands and giving hugs and kisses.

All care workers (health and non-health) had to strictly follow measures and rules to prevent and control the transmission of coronavirus (Departament de Salut, 2020c; Direcció General de l'Autonomia Personal i la Discapacitat del Departament de Treball, Afers Socials i Famílies, 2020b).

7.2.3. Measures to compensate for potential reductions in service

- Expansion of virtual visits system ("eConsult") by allowing the physician to appoint a videoconferencing session with the patient directly from the patient's EHR in both primary and specialized care.

- Development of a mobile health application for self-assessment of the disease (STOP COVID-19 CAT), which includes geolocation of patients.

- Enablement web access to the EHR throughout virtualization technologies.

- Reduction of bureaucratic barriers in healthcare processes by allowing patients to access their sick leave forms in their personal health folder ("My health"), allowing pharmacies to access the medication plans throughout the electronic prescription system of Catalonia to avoid citizens going to the primary care centres to collect their chronic prescriptions, automatic extension of the chronic medication plans (e.g., oral anticoagulant therapy).

- Psychological support telematic service: The "Col·legi Oficial de Psicologia de Catalunya" according to the actual situation, has participated actively in the creation of a free psychological support telematic service for all health care workers who experience emotional difficulties. It aimed to include in the service the Social Care Services workers from the Catalan system and spread the new psychological service system's tools throughout the whole citizenship during the emergency phase of the SARS-COVID-19 pandemic. The telephone number of the service was distributed to all Social Care Services workers, offering free psychological support. Also, the freephone number addressed to the citizenship was provided to the Social Care Service workers, especially the ones working in the "Basic Areas" of the services, to spread the number within the users of the service (General Directory of Personal Autonomy and Disabilities of the Work Department, Social Matters and Families, 2020a).

7.3. Impact on people with disabilities and people living with dementia and measures to support them

In March 2020, new protocols related to people with disabilities and people living with dementia attending day-care facilities were published, with some adapted actions to reinforce care at home and rehabilitation during the worst period of COVID-19 outbreak.

In the case of people with dementia or with a disability who had home support, each service had a register that enabled the identification of people who were less autonomous or more vulnerable. People using care services had to follow the general recommendations of prevention, protection and hygiene addressed to the general population. Moreover, the people considered to be more vulnerable were followed up to monitor their health, food intake, cohabitation, and safety in their own homes. All activities that promoted social relations and community leisure activities were cancelled.

A phone service was provided to answer any questions or problems. All the professionals who had face-to-face contacts inside the homes had to follow the prevention, protection and hygiene protocols established by the home care services. The professionals who reported respiratory symptoms, flu, fever, or that had been in risk zones in the last 14 days could not participate in the home care service as long as they were in the Health Department's identification process (Direcció General de l'Autonomia Personal i la Discapacitat del Departament de Treball, Afers Socials i Famílies, 2020h).

According to the nursing homes classifications A, B and C created in April 2020, nursing homes with people with intellectual or physical disabilities had to follow the interventions stipulated for the rest of care homes in any of the three different specified types (A, B or C).

The individuals who had a mental illness had the support of the specialized mental health service for people with intellectual disabilities (Servei Especialitzat en salut mental per a persones amb discapacitat intel·lectual or SESM-DI) and the adult mental health centre (Centre de Salut Mental d'Adults o CSMA) of reference. If a return to the domicile was considered, in the case of the type α individuals it was needed to consider not only the physical characteristics of the home (hygiene and isolation) but also the family environment affected since we are talking about a vulnerability group.

If a person with respiratory symptomatology was needed to be taken from one care home to another, an analysis of the free available spaces had to be carried out and the relocation had to be adjusted to the autonomy level of the user.

For people with a severe decompensation, a referral was made to the mental health hospitalization network. In all the cases, it was mandatory to maintain the correspondent hygienic and isolation measures depending on whether the person was COVID-19 positive, had suggestive symptomatology or if the symptomatology was absent.

Whichever was the home destination of the person, an adequate follow-up of their and those of their family was done (Departament de Salut, 2020d).

8. Lessons learnt so far

To reduce the spread of the infection, during the first wave and the start of the second one, several measures were adopted to reduce the impacts of the pandemic on people who use long-term care. These measures have been chosen on the basis of emerging evidence of effectiveness.

On the one hand, the pandemic has highlighted the importance of the interrelationship between professionals in Primary Care, Intermediate care and Social. It has also shown that Intermediate Care and Social services should be integrated so that the referral between them is faster and more efficient. In addition, although addressing the challenges experienced by nursing homes is a priority, it is extremely important to develop an integrated model of home care.

Lessons have also been learned on the importance of ensuring the necessary personal protection equipment and materials for both staff and users. Introducing digital resources to long-term care system, classifying of nursing homes according to the capacity of isolation and the existence of positive COVID-19 cases appear to helped mitigate the impact during second wave of the pandemic.

More research is needed to evaluate which measures and policies have worked or not.

The COVID-19 vaccines are starting in Catalonia, beginning with the people most vulnerable to the virus, most of whom are users of long-term care system.

8.1. Summary of actions adopted after the first wave:

- To control the spread of COVID-19, all nursing homes should write down an own individual “contingency plan” to assure measures and actions related to a check list of key areas and points.
- To deal with the second wave, a new stock of protective equipment and material must be available.
- The strong involvement and reinforcement of both PHC family doctors and community nurses in long-term care services will need to continue.
- It is needed to develop a new algorithm as a stratification tool to identify people who has greatest risk of mortality.

8.2. Longer term policy priorities

- Need to rethink the future model of Long-term Care in order to develop a better integrated care system. This should involve key stakeholders and the two government departments that are currently involved in the long-term care system.
- Although nursing homes are a priority, new strategies related to an integrative model of home care should be developed.
- A better connection should be built between nursing homes and the rest of Intermediate care system and Primary Care. This would allow faster referral to the hospital and a faster response from health and public health authorities in nursing homes settings.
- It is needed to continue developing digital tools and resources in the long-term care system. For example, the introduction of an electronic public health register with unique information for each person with an adaptation to long-term care system.
- The COVID-19 vaccination process is expected to begin with people at higher risk of mortality, identified by stratification algorithm created.

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